Mind Mirror Projects: A Tool for Integrating Critical Thinking into the English Language Classroom

dentifying a point of view can be a complex task in any language. By analyzing what characters say, think, and do throughout a story, readers can observe how points of view tend to change over time. Easier said than done, this ability to climb inside the mind of a character can help students as they analyze personalities found in literature, history, and the world around them.

In an English as a second language class for adults, I observed that my students had difficulty reading between the lines of a short story to analyze a character's point of view. In response, I used a mind mirror project to help students synthesize key story elements to create a visual representation of the character's perspective. My goal was to lead students to develop critical thinking skills. Towards this end, student feedback suggested that mind mirror projects can help students become self-aware, confident, and autonomous critical thinkers.

This article will outline the steps used to facilitate a mind mirror project

that analyzed characters from the short story, "The Lottery" (Jackson 1982). Additionally, this article will describe reflective activities that enabled students to monitor and improve critical thinking skills throughout the project and will conclude by offering insights for teachers interested in using mind mirror projects in their classrooms.

Mind mirrors as teaching tools

In guidelines provided by Delli-Carpini (2006), students create a mind mirror by analyzing a poem and identifying the following key elements that represent the speaker's point of view:

- two quotes
- two original statements
- two images
- two symbols

Students work in groups to create a poster that illustrates the key elements on an outline of the speaker's head. Groups then present their posters to the class.

The project described in this article builds on DelliCarpini's work.

Improving critical thinking skills

Mind mirror activities enable language teachers to integrate target language objectives with the development of critical thinking skills. According to Facione (2007), critical thinking is defined in terms of six cognitive skills: interpretation, analysis, evaluation, inference, explanation, and self-regulation. Although mind mirrors can enable learners to develop all of these cognitive skills, students used interpretation, inference, and self-regulation skills most. Thus, these skills are discussed in greater detail below.

- 1. Interpretation skill. Facione (2007) defines interpretation as comprehending and expressing meaning based on experiences, situations, data, and beliefs. The interpretation skill is comprised of two sub-skills: categorization, used when students locate appropriate key elements from the story and apply them to the mind mirror poster; and clarifying meaning, demonstrated when students review and discuss the connection between key elements and character identity.
- Inference skill. Inference means considering relevant information and determining the consequences resulting from data, statements, beliefs, or other forms of representation (Facione 2007). As a sub-skill of inference, students had to draw a conclusion to identify characters based on elements exhibited on posters.
- 3. Self-regulation skill. The self-regulation skill is perhaps the most remarkable critical thinking skill because it enables critical thinkers to improve their own thinking. Self-regulation occurs when we self-consciously monitor and evaluate our own work with a view toward questioning, confirming, or correcting either our reasoning or results (Facione 2007). Self-examination and self-correction are two subskills of self-regulation. Students used self-examination to remind themselves that viewers should be able to see a clear and obvious connection between the character and corresponding mind mirror elements. As a result, students

used self-correction skills to revise mind mirror elements to better reflect the character represented. Additionally, students used self-examination skills by reflecting on the connection between tasks and critical thinking skills used throughout the project (Appendix 1).

Facilitating a mind mirror project

Selecting an appropriate text is the first requirement for a successful mind mirror project. For the project discussed here, the teacher chose "The Lottery" because:

- themes clearly supported the overall unit focus on traditions.
- vocabulary and grammatical structures were appropriate for the students in the class.

Day 1: Preparing students for a mind mirror project

Before beginning the mind mirror project, the teacher facilitated pre-reading activities to familiarize students with key themes and vocabulary from the story. In order to bridge major themes from "The Lottery" to students' prior knowledge and experience, students completed a brief survey about the popularity and effects of lotteries in their community.

After reviewing the survey responses as a class, students worked in groups and used context clues to define key vocabulary in the story.

After processing the vocabulary activity, students read "The Lottery" for the first time and completed discussion questions for homework.

Day 2: Providing clear instructions, examples, and support

After reviewing the homework questions in class, the teacher distributed the Mind Mirror Worksheet (Appendix 2). In order to supplement the written instructions, the teacher displayed a sample mind mirror of someone that all students could identify—himself. The poster consisted of the following items:

- two symbols—a book and a stack of homework papers
- two background images—students working in groups and a classroom

- two adjectives that describe the person's feelings or actions—dedicated and energetic
- two sentences in the character's own words:
 - "I don't expect students to be perfect, but I expect students to improve."
 - 2) "You can do it."
- two original statements that describe how the reader feels about the character:
 - 1) "I think that this character enjoys his job."
 - 2) "Even though this character is sometimes strict, I think that he cares about the students."

The students were immediately able to see that the mind mirror was about the teacher. While identifying various poster symbols and phrases, one student said "I know it's the teacher because he always says that he expects students to improve." Another student shared that she knew it was the teacher because he is dedicated and he lets students work in groups. Once the class identified and discussed the parts of the example mind mirror, the teacher orally emphasized that:

- When choosing and applying mind mirror items, remember that classmates should be able to identify your character without seeing a name.
- Mind mirrors are not comic strips.
 Instead of creating separate pictures, work as a team to provide one outline of your character's head.
- Students should not view the mind mirror project as an art contest. Instead, the poster is a product of creativity and teamwork. When creating the poster, students should feel free to use their symbols and text to make facial features like eyes, lips, nose, ears, and hair.

After the teacher reviewed the instructions for creating a mind mirror, each student pulled the name of a character from a hat. (Characters were from "The Lottery," and each character's name was written on more than one piece of paper so that there were enough characters for each student in the class to draw one.) The teacher reminded students not to share their character names with classmates. This technique encouraged students to work individually before sharing

their findings with classmates who had picked the same character.

For the remainder of the class, the teacher circulated around the room to support students as they read "The Lottery" for a second time to fill in the Mind Mirror Worksheet (Appendix 2) with information about the character they had picked. Students completed the mind mirror worksheet individually for homework.

Day 3: Sharing, reviewing, and applying information

The teacher began class by asking students to sit with classmates who had also picked their character. Group members reviewed their homework and decided on which elements from their worksheets they would use to create one group mind mirror poster for their character.

Following DelliCarpini (2006), the teacher provided a marker of a different color to each student in the group. The teacher told students to use only their color to illustrate their items and to sign their names on the poster. In addition to enabling the teacher to view each student's work, this color-coded method promoted equal participation and accountability among all group members.

Day 4: Poster presentations

Groups posted their work on the wall, and everyone walked around the room discussing and identifying poster characters. Additionally, students completed feedback cards (Appendix 3) and placed them in envelopes attached to the posters. While observing the activity, the teacher could see that students were comfortable, confident, and continuously engaged. For instance, students who were normally quiet in front of the entire class were much more talkative as they gathered around the posters in small groups.

After reviewing poster feedback cards, each group member described his or her poster contribution in front of the class, and the teacher used a rubric (Appendix 4) to assess students' grammar, fluidity, and reasons for choosing specific elements.

Day 5: Identifying thinking skills

Students used a worksheet (Appendix 1) to reflect on and discuss thinking processes used throughout the project. Making con-

nections between critical thinking skills and project tasks, one student said that she used categorization skills when classifying mind mirror elements that best described her character. Another student pointed out that groups practiced inference skills when they used the symbols, background images, and quotations to figure out which characters were represented on the posters. Several students shared that they used self-examination skills when checking their illustration to see if others would be able to identify their character.

Providing feedback about the project, all of the students commented that discussing the cognitive processes used in the mind mirror project made them feel more confident as critical thinkers. In many instances, students expressed that they had used critical thinking skills in the past but had not been aware that they had. After identifying the connections between project tasks and thinking skills, students shared that they felt better prepared to monitor and improve their critical thinking skills.

Points for teachers to consider

Insights gained from conducting this mind mirror project can help teachers design their own projects. Some suggestions are discussed below.

Managing time

This mind mirror project took five different class sessions that lasted ninety minutes each. Selecting an appropriate text and preparing students for the project was critical for time management. Facilitating pre-reading activities helped familiarize students with themes and key vocabulary needed for timely completion of mind mirror tasks. Instead of having students complete the mind mirror worksheet for homework, teachers may choose to provide more class time so students can complete the worksheet in pairs with teacher support. Additionally, setting clear deadlines for each part of the project helped the class to remain on schedule.

Keeping students on task

Mind mirror projects require a great deal of focus and teamwork. By requiring each group member to make his or her contributions in a distinct color, the teacher was able to monitor both individual contributions and group teamwork.

Additionally, teachers are encouraged to provide clear directions, models, regular feedback, and opportunities for collaboration throughout the project.

Building awareness of critical thinking skills

By providing opportunities for students to reflect upon and discuss the thinking processes used to complete tasks, teachers help students to become self-aware, confident, and autonomous learners. Appendix 1 contains an activity that helped students identify and discuss thinking skills used to complete this project. Additionally, Appendix 4 provides a rubric that the teacher and students can use to assess performance in selected skills areas.

Adapting mind mirror projects across content areas

Although this mind mirror project analyzed characters from a short story, teachers can adapt this framework, following the steps outlined in this article, to encourage their students to analyze the experiences and perspectives of family members, friends, athletes, film characters, musicians, historical people, ethnic groups, video game characters, political leaders, and more.

Conclusion

The mind mirror project described in this article offered students a variety of opportunities to demonstrate their critical thinking skills. Calling to mind the popular saying that "You can't judge a book by its cover," this project showed students how to read between the lines in order to describe a character's point of view in terms of what that character says, thinks, and does throughout a story. Moreover, by increasing student confidence, self-awareness, and autonomy, this project prepared students to monitor and improve their critical thinking skills in future academic tasks. On a larger scale, as students take these lessons outside of the classroom, mind mirror projects can prepare them to better identify and understand the many points of view that exist in the world around them.

References

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MATTHEW M. TULLY is a trainer of trainers at the American Center in Rangoon, Burma, where he taught English for Academic Purposes as an English Language Fellow. Previously, he taught ESL in New York City and taught EFL as a Peace Corps Volunteer in Cameroon. He earned his MA TESOL from Teachers College, Columbia University.

Appendix 1 Identifying Thinking Skills

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By using this table (adapted from Facione 2007), students analyzed the connection between tasks and critical thinking skills used throughout the mind mirror project. Below are sample directions:

- Circle one activity in the left column that you did during the project.
- Match your activity with an item used or created during the project.
- Discuss your answers with a partner. Provide examples.

Thinking Skills Activities	Items Used or Created	Notes / Examples
Categorization Classify Sort Group	Character's Identity Direct Quotation	
Clarifying Meaning Straighten Out Make Plain Clear Up	Symbols Images Adjectives Body Language	
Inference Figure Out Assume Derive	Illustration Text Point of View	
Self-Examination Question Monitor Check	Results Causes My Thinking My Performance	
Self-Correction Improve Revise Edit	Poster Worksheet Answers	

Appendix 2 Mind Mirror Worksheet

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PART 1: Answer the questions below. Remember, anyone who knows about your character should be able to see a clear and obvious connection between your character and the items in your mind mirror.

acter and the items in your mind mirror.			
1. Name of the <i>character</i> :			
2. Write or draw two objects that best represent this person's beliefs and experiences (symbols):			
3. When I think of this person's life, what do I see him/her doing? Where is he/she? (background images)			
4. List two words (adjectives) that describe this person's feelings or actions:			
5. If this person could speak, what would he/she say? Provide two sentences. (quotations)			
6. Write two statements that describe how you feel about this character. (original statements)			
I think that this character			

PART 2: Each group member will illustrate at least one item from Part 1 on a poster outline of your character's head. This does not have to be a normal picture. Instead, feel free to use words and pictures to make the facial features (hair, ears, eyes, nose, lips, etc.) of your character. **Do not share your character's name with other groups.** Viewers should be able to identify your character based on the elements they see in your mind mirror.

Use your color marker to:

- add your contribution to the group poster.
- write your name on the back of the poster.

Appendix 3 Poster Feedback Card

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Poster Feedback cards make poster presentations more interactive. This tool provides a meaningful form of peer feedback and enables students to realize that their work has an impact on the greater community.

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This rubric was used to assess student performance throughout this mind mirror project.

Skills	3	2	1		
Interpretation (Mind Mirror Worksheet)	All worksheet items display clear and accurate comprehension of character's experience	1–2 inaccurate or unclear items	3 or more inaccurate or unclear items		
Group Work (Creating the poster)	Always invites and responds to classmates' suggestions	Sometimes invites and responds to classmates' suggestions	Rarely invites and responds to classmates' suggestions		
Poster Presentation					
Explanation (Providing accurate and logical reasons for choosing poster elements)	All reasons for choosing elements are accurate and logical.	1–2 reasons are inaccurate or illogical	3 or more inaccurate or illogical reasons		
Fluidity (Speed / Pauses)	Pauses used strategically	Pauses signal minor confusion or breakdown in speech	Pauses signal significant confusion or breakdown in speech.		
Grammatical Accuracy (Subject / Verb Agreement)	No errors	1–2 errors	3 or more errors		

Total Rubric Points x 6.6 = Score/100